

DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Benjamin K. Brown on 05/06/2009, followed by applicant's proposed claim amendments.

The claims have been amended as follows:

1. (Currently amended) A method for managing resources in networking, on a gateway platform, the method comprising:

adding a field to an operating system kernel software procedure stored in a computer readable medium of the gateway platform, the field referencing a virtual router context;

modifying the operating system kernel stored in the computer readable medium to provide heritability of the field referencing a the virtual router context in at least one of a process and a socket; and

modifying packet processing code to determine the socket with which an ingress packet is associated based on the virtual router context of the ingress packet;

modifying the packet processing code to select a routing table based on the virtual router context of the socket sending an egress packet; and

modifying the operating system kernel to designate a lead operating system kernel for a distributed host, wherein the distributed host includes a plurality of processors in the gateway platform that are assigned one Internet Protocol (IP) address so that the plurality of processors implement a single IP host, and wherein the lead operating system kernel performs tasks for the distributed host as a whole and not for any specific connection or port.

21. (Currently amended) The method of claim 1, further comprising providing ~~an~~ the single IP host that is compatible with existing protocols.

22. (Currently amended) The method of claim 1, further comprising running separate operating system instances on the plurality of processors ~~residing on~~ in the gateway platform.

23. (Currently amended) An apparatus gateway platform residing in a communication network comprising:

a plurality of processors residing in the gateway platform and implementing a distributed host, wherein the distributed host includes a plurality of processors in the gateway platform that are assigned one Internet Protocol (IP) address so that the plurality of processors implement a single IP host, and wherein individual processors of the plurality of processors determine

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responsibility for processing packets received at each processor, such that when a packet is received at an individual processor of plurality of processors, the individual processor determines whether to handle the processing of the packet itself or to send the packet to a second processor for processing; and

at least one computer readable medium, in communication with at least one of the plurality of processors, storing:

an operating system instance whose kernel is adapted to includes include a field to indicate an appropriate virtual routing router context within the apparatus gateway platform to handle an incoming data packet, wherein the field is heritable in the virtual routing router context: in at least one of a process and a socket;

packet processing code that determines the socket with which an ingress packet is associated based on the virtual router context of the ingress packet, and selects a routing table based on the virtual router context of the socket sending an egress packet.

27. (Cancelled)

28. (Cancelled)

35. (New) A gateway platform residing in a communication network comprising:

a plurality of processors residing in the gateway platform and implementing a distributed host, wherein the distributed host includes a plurality

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of processors in the gateway platform that are assigned one Internet Protocol (IP) address so that the plurality of processors implement a single IP host; and

at least one computer readable medium, in communication with at least one of the plurality of processors, storing:

an operating system instance whose kernel is adapted to include a field to indicate an appropriate virtual router context within the gateway platform to handle an incoming data packet, wherein the field is heritable in the virtual router context in at least one of a process and a socket, and the kernel designates a lead operating system kernel which performs tasks for the distributed host as a whole and not for any specific connection or port;

packet processing code that determines the socket with which an ingress packet is associated based on the virtual router context of the ingress packet, and selects a routing table based on the virtual router context of the socket sending an egress packet.

36. (New) The gateway platform of claim 35, wherein the single IP host is compatible with existing protocols.
37. (New) The gateway platform of claim 35, wherein the distributed host runs application software written for a single processor host implementation.
38. (New) The gateway platform of claim 35, wherein at least a two of the plurality of processors run separate operating system instances.

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39. (New) The gateway platform of claim 37, wherein the distributed host provides the operating system instances bindings to different sockets, which are assigned the same IP address.
40. (New) The gateway platform of claim 35, wherein the gateway platform supports voice and data services on one or more mobile wireless networks.
41. (New) The gateway platform of claim 35, further comprising a network interface in communication with the kernel that tags a packet with a context number.
42. (New) The gateway platform of claim 35, wherein the kernel uses the context number of a packet in order to deliver a packet to a process.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

Claims 1, 21-26, 29-42 are allowed. The prior art of record does not teach the claimed invention, as follows.

For independent claims 1, 23 and 35, the prior art does not teach or render obvious a gateway platform or a method for managing resources in networking on the gateway platform, the gateway platform/method comprising: adding a field to an operating system kernel software procedure, the field referencing a virtual router context; modifying the operating system kernel to provide heritability of the field referencing the virtual router context in at least one of a process and a socket; modifying packet processing code to determine the

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socket with which an ingress packet is associated based on the virtual router context of the ingress packet; modifying packet processing code to select a routing table based on the virtual router context of the socket sending an egress packet; wherein the distributed host includes a plurality of processors in the gateway platform that are assigned one Internet Protocol (IP) address so that the plurality of processors implement a single IP host.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is included in form PTO 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hieu T. Hoang whose telephone number is 571-270-1253. The examiner can normally be reached on Monday-Thursday, 8 a.m.-5 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The

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fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HH

/Kenny S Lin/
Primary Examiner, Art Unit 2452